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**Via Email**

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March 1, 2019

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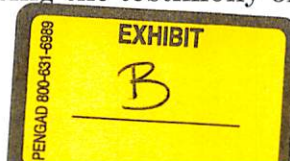
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**Re: United States v. Kealoha, et al.**  
Case No. 17CR00582-JMS-RLP (D. Hawaii)

Dear Counsel:

In December 2017, we produced in discovery the transcript of Special Agent Laura Salazar's testimony before the grand jury on October 20, 2016 (KEALOHA-GJT-003423 to 003434), as well as the exhibits to her testimony (KEALOHA-GJEX-LS-001.000001; KEALOHA-GJEX-LS-002.000001 through .000008; KEALOHA-GJEX-LS-003.000001). During her testimony, Special Agent Salazar summarized findings of an FBI digital extraction technician who reviewed the video surveillance hard drives produced by HPD. Some of the images extracted from these hard drives were also discussed during the testimony of Benji Tokioka (KEALOHA-GJT-003275 to 003314) and Alvin Lum (KEALOHA-GJT-003251 to 003274), and the process of copying over video surveillance hard drives was discussed during the testimony of Laine Yamakawa (KEALOHA-GJT-008482 to 8532).



Letter to counsel

*U.S. v. Kealoha, et al.*, 17CR0582-JMS

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If you are willing to stipulate to the substance of Agent Salazar's testimony and the accompanying exhibits, please let us know. If not, we intend to call Video Communications Specialist Thomas Woodard to testify at trial. Reports related to Specialist Woodard were provided to you in discovery as early as November 2017 (e.g., KEALOHA-REPORTS-019243; KEALOHA-REPORTS-032767; KEALOHA-REPORTS-032772; KEALOHA-REPORTS-021212; KEALOHA-REPORTS-001053). Although we do not believe Specialist Woodard's testimony would be covered by Fed. R. Evid. 702, out of an abundance of caution his curriculum vitae is attached.

Please let us know if you have questions or wish to discuss a stipulation.

Very truly yours,

WILLIAM P. BARR  
United States Attorney General  
ROBERT S. BREWER, JR.  
United States Attorney

/s/*Eric J. Beste*

MICHAEL G. WHEAT

ERIC J. BESTE

JANAKI S. GANDHI

COLIN M. MCDONALD

Special Attorneys to the Attorney General

## **CURRICULUM VITAE**

### **Thomas A. Woodard Jr., M.Ed., GCCF**

Federal Bureau of Investigation  
Forensic Audio, Video Image Analysis Unit  
ERF Building 27958A  
Quantico, VA 22135  
PHONE: 703-985-3916  
FAX: 703-985-3483

## **PROFESSIONAL EXPERIENCE**

Sep. 2018 – Present                      **Video Communications Specialist**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

Assigned to the Computer Analysis Response Team (CART) in an ASCLAD/LAB accredited laboratory, to analyze digital evidence, and reverse engineer CCTV DVR's, and document unknown operating systems as a Digital Evidence Extraction Technician (DEXT).

Technical Lead for CCTV DVR recovery, support examinations of digital evidence, maintains the DVR research/examination laboratory, and conduct research.

Oct. 2015 – Sep. 2018                      **Video Communications Specialist**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

Assigned to the Forensic Audio, Video Image Analysis Unit (FAVIAU) in an ASCLAD/LAB accredited laboratory, to analyze digital evidence, and reverse engineer CCTV DVR's, and document unknown operating systems as a Digital Evidence Extraction Technician (DEXT).

Technical Lead for CCTV DVR recovery, support examinations of digital evidence, maintains the DVR research/examination laboratory, and conduct research.

Feb. 2014 – Oct. 2015                      **Training Liaison and Change Management Specialist**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

Assigned to the Forensic Audio Video Image Analysis Unit (FAVIAU) in an ASCLAD/LAB accredited laboratory, to analyze digital evidence, and reverse engineer CCTV DVR's, and document unknown operating systems as a Digital Evidence Extraction Technician (DEXT).

Technical Lead for CCTV DVR recovery, support examinations of digital evidence, initial setup of and maintenance of the DVR research/examination laboratory, and conduct research.

Jul. 2012 – Feb 2014                      **Training Liaison and Change Management Specialist**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

Assigned to Computer Analysis Response Team (CART) OSU (Operational Support Unit). Assigned to write a Digital Extraction Technician Curriculum and instructed this training to Computer Forensic Technicians. Assisted in the management of the DEXT program. Designated as the FOU SME for X-Ways, and DEXT.

Nov. 2011 – Jul. 2012

**Senior Computer Forensic Examiner (CART TECH Program Manager)**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

Extended Temporary Duty Assignment from CART FAU (Forensic Analysis Unit) to CART OSU (Operational Support Unit). Assigned to write a Computer Forensic Technician Training Curriculum and provide instruction to Computer Forensic Technicians. Assisted in the management of the CART TECH and DExT programs. Became Senior Examiner upon completing required tasks (passing Sr. Written test, Conduct and present approved research).

Sep. 2010 – Nov. 2011

**Computer Forensic Examiner (CART TECH Program Manager)**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

One year Temporary Duty Assignment from CART FAU (Forensic Analysis Unit) to CART OSU (Operational Support Unit). Assigned to write a Computer Forensic Technician Training Curriculum and provide instruction to Computer Forensic Technicians. Assisted in the management of the CART TECH program.

Sep. 2008 – Sep. 2010

**Computer Forensic Examiner**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

As a forensic computer examiner in an ASCLD/LAB accredited laboratory, examined physical evidence under a documented quality assurance program that included annual proficiency testing, technical/peer and administrative reviews and adherence to standard operating procedures.

Conducted forensic examinations on digital evidence, carried out research and development activities, and performed search and seizure operations. Instructed Image Scan Classes; Provided phone support to users of Image Scan. Instructed classes to New Agents at the FBI Academy. Instructed classes to Intelligence analysts at FBI Cyber Academy.

Sep. 2006 – Sep. 2008

**Computer Forensic Examiner Trainee**  
FBI Digital Evidence Laboratory  
Federal Bureau of Investigation  
Quantico, Va.

As a forensic computer examiner trainee in an ASCLD/LAB accredited laboratory, examined physical evidence under a documented quality assurance program that included annual proficiency testing, technical/peer and administrative reviews and adherence to standard operating procedures under the supervision of a certified computer forensic examiner.

Conducted forensic examinations on digital evidence, carried out research and development activities, and performed search and seizure operations under the supervision of a certified computer forensic examiner.

Aug. 2004 – Sep. 2006

**Computer Forensic Examiner**  
Central Florida Computer Forensics  
Orlando, Fl.

Conducted forensic examinations on computers, and conducted data recovery services.

**EDUCATION**

July 2004	University of Central Florida Orlando, Florida Graduate Certificate in Computer Forensics (GCCF)
December 1998	National-Louis University Evanston, Illinois Master of Education in Curriculum and Instruction (M.Ed.)
December 1994	Lander University Greenwood, South Carolina Bachelor of Science in Sociology (B.S.)

**PROFESSIONAL TRAINING**

October 2018	Open Source Digital Forensics Conference (OSDFCon) 8 Hour Conference 10-17-2018 Herndon, Virginia
May 2018	Grant Frederick's presentation 3 Hour presentation on Video Forensics 5-29-2018 Quantico, Virginia (FBI National Academy)
October 2017	ISO Based Media File Format (MP4, MOV, 3GP) - AVPreserve 16 Hour Class 10-25-17 to 10-26-17 Quantico, Virginia)
June 2017	2017 AES International Conference on Audio Forensics Audio Engineering Society 8 Hour Conference 6-15-2017 Arlington, Virginia
June 2017	Advanced analysis and authentication - University of Colorado (Denver) National Center for Media Forensics 16 Hour Class 6-8-17 to 6-9-17 Quantico, Virginia
August 2017	Digital Evidence Committee Meeting, International Association for Identification Group meeting 8-9-17
October 2016	Open Source Digital Forensics Conference (OSDFCon) 8 Hour Conference 10-26-2016 Herndon, Virginia
September 2016	Amped Five 32 Hour Class 9-26-16 to 9-29-16 Quantico, Virginia
September 2016	Meta data class AVPreserve (updated version) 16 Hour Class 8-21-16 to 8-22-16 Quantico, Virginia
September 2016	Photoshop Forensics Resolution Video 32 Hour Class 9-12-16 to 9-15-16 Quantico, Virginia)

September 2016	Fundamentals of Digital Image and Video Processing Northwestern University Class 6-26-16 to 9-19-16 (Completed 8/18/2016) On-Line (through Coursera)
August 2016	Adobe Premiere for Forensics (Updated Version) Resolution Video 24 Hour Class 8-24-16 to 8-26-16 Quantico, Virginia
August 2016	Digital Evidence Committee Meeting, International Association for Identification Group meeting 8-10-16
June 2016	Ad Hoc Committee CCTV DVR Data recovery (Chair) Scientific Working Group Digital Evidence Group meeting 6-6-16 to 6-10-16 Denver, Colorado (University of Colorado)
May 2016	Adobe Premiere for Forensics Resolution Video 24 Hour Class 5-16-16 to 5-18-16 Quantico, Virginia
May 2016	FFMPEG for Forensics Resolution Video 16 Hour Class 5-18-16 to 5-20-16 Quantico, Virginia
January 2016	Ad Hoc Committee CCTV DVR Data recovery (Chair) Scientific Working Group Digital Evidence Group meeting 1-11-16 to 1-14-16 Fort Worth, Texas (Fort Worth Police)
September 2015	Ad Hoc Committee CCTV DVR Data recovery (Chair) Scientific Working Group Digital Evidence Group meeting 9-14-15 to 9-18-15 San Jose, California (Adobe)
August 2015	Meta data class AVPreserve 16 Hour Class 8-26-15 to 8-27-15 Quantico, Virginia
August 2015	Reverse Engineering class (Harris Corporation) 16 Hour Class 8-11-15 to 8-12-15 Quantico, Virginia
August 2015	International Association for Investigation - Educational Conference Presentations 8-3-15 to 8-7-15 (Also a Presenter) Sacramento, California
June 2015	Ad Hoc Committee CCTV DVR Data recovery (Chair) Scientific Working Group Digital Evidence Group meeting 6-1-15 to 6-5-15 Denver, Colorado (University of Colorado)
March 2015	FBI Audio/Video Basic Course 32 Hours Class 3-24-15 to 3-27-15 Quantico, Virginia

March 2015	Digital Forensic Forum 8 Hour Group presentation 3-10-15 CIA Headquarters Langley, Virginia
January 2015	Ad Hoc Committee CCTV DVR Data recovery (Chair) Scientific Working Group Digital Evidence Group meeting 1-11-15 to 1-16-15 Houston, Texas (DEA Houston Office)
August 2014	Instructional Strategies Course (ISC) 40 Hour Class 8-4-14 to 8-8-14 FBI Academy Quantico, Virginia
August 2014	DAC class (Digital Audio Corporation) 24 Hour Class 7-15-14 to 7-17-14 FBI FAVIAU Classroom ERF-E Quantico, Virginia
March 2014	Divert Class (CCTV DVR Recovery class) 40 Hour 3-10-14 to 3-14-14 FBI – DARC Lab – BWI Baltimore, Maryland
March 2014	Digital Evidence Extraction Technician 72 Hour Class 3-6-14 (Tested out) FBI Academy Quantico, Virginia
January 2014	Presentation Skills Course (PSC) 24 Hour Class 1-14-14 to 1-16-14 FBI Academy Quantico, Virginia
February 2013	X-Ways Forensics (FBI Version) 24 Hour Class 2-26-13 to 2-28-13 Northwest RCFL Portland, Oregon
August 2012	Digital Evolution Workshop 40 Presentation Hours 8-26-12 to 8-30-12 (Also a presenter) Norman, Oklahoma
August 2012	Sans 408 System Forensics 40 Hour Class 7-28-12 to 8-3-12 Federal Bureau of Investigation at Heart of America Regional Computer Forensic Lab Kansas City, Missouri
July 2012	CART Basic Tools 24 Hour Class 7-24-12 to 7-26-12 FBI Academy Quantico, Virginia
February 2012	X-Ways (Vendor Version) 24 Hour Class 2-22-12 to 2-24-12 Houston, Texas

May 2011	DriveQuest Train the Trainer 24 Hour Class 5-10-11 to 5-12-11 FBI – DARC Lab – BWI Baltimore, Maryland
March 2011	High Technology Crime Investigation Association Meeting An Intro Into Mobile Device Forensics 3 Presentation Hours 3-30-11 George Washington University, Virginia
February 2011	Live Capture 24 Classroom Hours 2-1-11 to 2-3-11 Federal Bureau of Investigation at Orange County Regional Forensic Laboratory Orange County, California
January 2011	Instructor – Basic 40 Classroom Hours 1-24-11 to 1-28-11 Federal Bureau of Investigation Chantilly, Virginia
September 2010	EnCase Computer Forensics II 24 Classroom Hours 9-14-10 to 9-17-10 Guidance Software at BWI CART Lab Baltimore, Maryland
July 2010	Challenges of Solid State Drive Forensic Analysis Polytecnic Institue of New York University – Nasir Memon 2 Presentation Hours 7-28-10 Digital Evidence Laboratory – Federal Bureau of Investigation Quantico, Virginia
June 2010	Cybercop 310 (NTOS) NT Operating System 27 Classroom Hours 6-21-10 to 6-24-10 National White Collar Crime Center Indianapolls, Indiana
June 2010	InfinaDyne Presentation to FBI CD/DVD Inspector automated examination tool 2 Presentation Hours 6-15-10 Digital Evidence Laboratory - Federal Bureau of Investigation Quantico, Virginia
June 2010	Window Forensics Registry (Advanced Course) (Version 3) 21 Classroom Hours 6-1-10 to 6-3-10 AccessData Houston, Texas
April 2010	Federal Bureau of Investigation Sr. Moot Court 4-26-10 to 4-29-10 Federal Bureau of Investigation Albuquerque, New Mexico
March 2010	High Technology Crime Investigation Association Meeting Presentation Skills and Analysis of Structured Data 2 Presentation Hours 3-24-10 George Washington University, Virginia
March 2010	Technology Awareness Forum – Impact of Wireless Technology 2 Presentation Hours 3-16-10 FBI Academy Quantico, Virginia



June 2009	SANS Security 606 Drive and Data Recovery Forensics 40 Classroom Hours 6-15-09 to 6-19-09 SANSFIRE 2009 Baltimore, Maryland
February 2009	Linux Command Line 24 Classroom Hours 2-24-09 to 2-26-09 Federal Bureau of Investigation at Heart of America Regional Computer Forensic Lab Kansas City, Missouri
December 2008	Cybercop 401 – Linux File System 36 Classroom Hours 12-8-08 to 12-12-08 National White Collar Crime Center Fairmont, West Virginia
October 2008	Virtual Forensics for Linux 40 Classroom Hours 10-20-08 to 10-24-08 Federal Bureau of Investigation at Philadelphia Regional Computer Forensic Lab Philadelphia, Pennsylvania
August 2008	Data Recovery Course 32 Classroom Hours 8-12-08 to 8-14-08 CPR Tools Labelle, Florida
July 2008	Ethics Issues Confronting Forensic Labs 8 Classroom Hours 7-1-08 Digital Evidence Laboratory - Federal Bureau of Investigation Quantico, Virginia
May 2008	Image Scan Version 3 8 Classroom Hours 5-15-08 Federal Bureau of Investigation Martinsburg, West Virginia
August 2007	Federal Bureau of Investigation Moot Court 8-13-07 to 8-17-07 Federal Bureau of Investigation Phoenix, Arizona
June 2007	Net + test preparation 36 Classroom Hours 6-25-07 to 6-29-07 Federal Bureau of Investigation at Western New York Regional Computer Forensic Lab Buffalo, New York
May 2007	Basic Wintel Certification Training Practical's (5 Day Version) 36 Classroom Hours 5-7-07 to 5-11-07 Federal Bureau of Investigation Fredericksburg, Virginia
February 2007	Window Forensics (Advanced Course) 21 Classroom Hours 2-13-07 to 2-15-07 AccessData at Center for Computer Security Research Mississippi State, Mississippi
January 2007	AccessData Bootcamp (Intermediate Course) 21 Classroom Hours 1-9-07 to 1-11-07 AccessData at Denver Regional Computer Forensic Lab Denver, Colorado

November 2006	Cybercop 101 Basic Data Recovery and Acquisition Course (BDRA) 32 Classroom Hours 11-13-06 to 11-16-06 National White Collar Crime Center Fairmont, West Virginia
December 2005	Cyber-Investigation 100 (STOP) Secure Techniques for Onsite Preview 16 Classroom Hours 12-5-05 to 12-6-05 National White Collar Crime Center at National Center for Forensic Science Orlando, Florida
August 2005	Advanced Data Recovery and Acquisition Course – NTx (ADRA) 36 Classroom Hours 8-22-05 to 8-26-05 National White Collar Crime Center Miami, Florida
August 2005	Advanced Data Recovery and Acquisition Course – Inet (ADRA) 32 Classroom Hours 8-1-05 to 8-4-05 National White Collar Crime Center Jacksonville, Florida
July 2005	Introduction to Vmware 4 Presentation Hours 7-7-05 Vmware Tampa, Florida
June 2005	Computer Forensic Certified Examiner Course 80 Classroom Hours 6-1-05 to 6-16-05 International Association of Computer Investigative Specialists Altamonte Springs, Florida
January 2005	Advanced Data Recovery and Acquisition Course - E-Mail (ADRA) 36 Classroom Hours 1-10-05 to 1-14-05 National White Collar Crime Center Orlando, Florida
September 2005	AccessData Bootcamp (Intermediate Course) 21 Classroom Hours 8-30-05 to 9-1-05 AccessData at the National Center for Forensic Science Orlando, Florida
April 2004	Advanced Data Recovery and Acquisition Course - 9x (ADRA) 36 Classroom Hours 4-26-04 to 4-30-04 National White Collar Crime Center Orlando, Florida
March 2004	Basic Data Recovery and Acquisition Course (BDRA) 36 Classroom Hours 3-22-04 to 3-26-04 National White Collar Crime Center Tampa, Florida
September 2002	Ilook v.7 24 Classroom Hours 9-2-02 to 9-4-02 Federal Bureau of Investigation at the National Center for Forensic Science Orlando, Florida

**PROFESSIONAL AFFILIATIONS / COMMITTEES**

2015 - Present	Member of International Association for Identification (Member of Digital Evidence Committee)
2015 – 2017	Member of Scientific Working Group - Digital Evidence (SWGDE) Chair of DVR ad-hoc committee

2010 – 2013	Member, High Technology Crime Investigation Association (HTCIA) (Board Member in 2013)
2005 – 2007	Member, International Association of Computer Investigative Specialists (IACIS)
2003 — 2005 (IACIS)	Associate Member, International Association of Computer Investigative Specialists

#### **PERMANENT CERTIFICATIONS**

August 2009	Certified Data Recovery Professional – InfoSec Institute
March 2009	Linux Command Line Certified - Federal Bureau of Investigation
December 2006	A+ Certification - CompTIA.
June 2005	Certified Electronics Evidence Collection Specialist (CEECS) - International Association of Computer Investigative Specialists.

#### **ANNUAL CERTIFICATIONS**

March 2014 (2017)	Computer Analysis Response Team Technician – Federal Bureau of Investigation (Recertified 2017)
November 2011 (expired 2012)	Computer Analysis Response Team Senior Forensic Examiner - Federal Bureau of Investigation
September 2009	AccessData Certified Examiner – AccessData Corp. (expired 2012)
September 2008	Computer Analysis Response Team Forensic Examiner - Federal Bureau of Investigation (expired 2012)
June 2008	Image Scan Instructor - Federal Bureau of Investigation (expired 2012)

#### **AWARDS**

May 2015	Nominated for the International Association of Chiefs of Police – August Vollmer Award for Innovation's in Forensic Science
April 2013	Nominated for the FBI Directors Award – FBI HQ
April 2011	Gold Star Award – FBI HQ – (Received with William Fitzpatrick, and Susan Komar.)
September 2010	Cash Award (\$300) – FBI HQ – Operation (Name redacted)
May 2010	Certificate of Achievement – New York City Federal Executive Board
March 2010	16 Hour Time Off Award – FBI NY Cart – Operation High Rise
February 2010	Letter of Appreciation – FBI HQ – Digital Evidence Section Chief Motta
January 2010	Letter of Appreciation – Special Agent in Charge Welch (SAC Indianapolis)
December 2009	8 Hour Time Off Award – Forensic Support Unit
September 2009	Letter of Appreciation – FBI NY Cart – Operation High Rise
May 2009	Certificate of Achievement – Director Mueller
April 2009	Cash Award (\$300) – FBI HQ – Operation Achilles

March 2008      Plaque – ImageScan v3 Beta Tester

September 2006 Letter of Appreciation – FBI HQ – Digital Evidence Section Chief DiClemente

**CLASSES TAUGHT**

August 2015      CCTV Security DVR Data Recovery by Date and Time - IAI Sacramento, Ca.  
May 2015          CCTV Security DVR Data Recovery by Date and Time - FBI Quantico, Va.  
March 2015        CCTV Security DVR Data Recovery by Date and Time - FBI Quantico, Va.  
January 2014      FBI CART TECH Class – FBI Quantico (annex), Va.  
December 2013    DExT Class – FBI Quantico (annex), Va.  
August 2013      DExT Class – FBI Quantico (annex), Va.  
October 2013     DExT Class – FBI Quantico (annex), Va.  
June 2013        DExT Class – FBI Quantico (annex), Va.  
May 2013         FBI CART TECH Class – FBI Quantico (annex), Va.  
April 2013        DExT Class – FBI Quantico (annex), Va.  
March 2013        DExT Class – FBI Quantico (annex), Va.  
February 2013    DExT Class – FBI Quantico (annex), Va.  
October 2012     Computer Scientist Class – FBI Academy Quantico, Va. (class 12-01)  
September 2012   DExT Class – FBI Quantico (annex), Va.  
July 2012         DExT Class – FBI Quantico (annex), Va.  
June 2012        DExT Class – FBI Quantico (annex), Va.  
May 2012         DExT Class – FBI Quantico (annex), Va.  
April 2012        DExT Class – FBI Quantico (annex), Va.  
March 2012        DExT Class – FBI Quantico (annex), Va.  
February 2012    DExT Class – FBI Quantico (annex), Va.  
December 2011   DExT Class – FBI Quantico (annex), Va.  
October 2011     DExT Class – FBI Quantico (annex), Va.  
August 2011      FBI CART TECH Class – FBI Quantico (annex), Va.  
June 2011        FBI New Agents Training – FBI Academy Quantico, Va. (class 11-09)  
May 2011         FBI New Agents Training – FBI Academy Quantico, Va. (class 11-07 and 11-08)  
May 2011         CART 101 Training – FBI Quantico (annex), Va.  
March 2011        FBI New Agents Training – FBI Academy Quantico, Va. (class 11-05 and 11-06)

March 2011 FBI CART TECH Class – Quantico, Va Annex (Co-taught with Susan Komar)  
February 2011 FBI CART TECH Class – Quantico, Va Annex (Co-taught with Susan Komar)  
January 2011 Cyber 1101 Investigative Techniques and Recourses (Centra Class)  
January 2011 FBI New Agents Training – FBI Academy Quantico, Va. (class 11-02)  
December 2010 FBI CART TECH Beta class – Quantico, Va Annex (Co-taught with Susan Komar)  
December 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 11-01)  
October 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-19)  
September 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-17 and 10-18)  
September 2010 CART 101 Training – FBI Quantico (annex), Va.  
August 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-15 and 10-16)  
August 2010 Cyber 1101 Investigative Techniques and Recourses (Centra Class)  
July 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-12 and 10-14)  
June 2010 Coach/Mentor to FE Ken Marr – CART 101 Training (June –September)  
May 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-11)  
April 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-08 and 10-09)  
March 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-05, 10-06, 10-07)  
February 2010 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-03)  
December 2009 FBI New Agents Training – FBI Academy Quantico, Va. (class 10-01 and 10-02)  
November 2009 FBI New Agents Training – FBI Academy Quantico, Va. (class 09-20)  
October 2009 FBI Staff Operations Specialist Training – Quantico, Va. (class 09-03)  
October 2009 FBI New Agents Training – FBI Academy Quantico, Va. (class 09-18)  
September 2009 FBI New Agents Training – FBI Academy Quantico, Va. (class 09-15 and 09-17)  
April 2009 Image Scan Class Version 3.02a – Hillsborough County SO Tampa, Fl.  
April 2009 Image Scan Class Version 3.02a – FDLE Lab Tampa, Fl. (two classes)  
March 2009 Image Scan Class Version 3.02 – BWI Lab Md.  
January 2009 Image Scan Class Version 3.02 – Norfolk Va.  
July 2008 Image Scan Class Version 3.01 – FBI Quantico Annex Va.

**PAPERS / REPORTS WRITTEN**

January 2015 SWGDE Best Practices for the Recovery of Data from CCTV Digital Video Recorders (Primary Writer and Chair for SWGDE Ad Hoc committee) (This draft document is posted for public comment)  
March 2013 Chromebook Forensics (Submitted to Unit Chief)

December 2012 Digital Evidence Extraction Technician Course (Designed Curriculum, Primary Writer of course)

October 2011 Recovering Windows Logon Passwords in a Forensic Manner – FBI Technical Article. (Submitted to Unit Chief)

October 2011 Using MHDD in Data Recovery – FBI Technical Article. (Submitted to Unit Chief)

April 2011 Sr. CART Research Project-Forensic Testing of the TD-1 (Peer reviewed by FSU T and V, FSU UC, CART Wintel PM, CART UC.)

April 2011 Self Paced Training for TD-1 Curriculum

April 2011 TD-1 testing of new firmware v2.32

February 2011 CART TECH Curriculum Rewritten (co-authored by Program Manager Susan Komar)

January 2011 Testing and validation of Tableau TD1 Hard Drive Duplicator (Sr. Research Project)

December 2010 CART TECH Curriculum (co-authored by Program Manager Susan Komar)

December 2010 "TD1 Problems located during testing" – Paper written, Peer reviewed, and sent to Tableau.

October 2010 "TD1 Problems located and reported to Tableau" – Paper written, Peer Reviewed, and sent to Tableau.

June 2010 New Agents Training CART Lesson Plan, rewritten for New Agents training.

November 2009 New Agents Training CART Lesson Plan, rewritten for New Agents training.

July 2008 Forensic Notebook Drivedock v4 Writeblock Failer.

November 2007 Forensic Notebook Drivedock Writeblock Failer. (co-authored by FE Erin Gabor.)

#### **PEER REVIEWS**

01/13 to 09/13 File System Research Papers (one of four graders authorized to grade Forensic Examiner Research papers within the FBI)

April 2011 Proficiency Examination Grader for FBI Forensic Support Unit.

November 2009 Proficiency Examination Grader for FBI Forensic Support Unit.

October 2009 Proficiency Examination Grader for FBI Forensic Support Unit.

March 2009 Beta Tester for Image Scan CD Version 3.02a

December 2008 Proficiency Examination Grader for FBI Forensic Support Unit.

March 2008 Beta Tester for ImageScan v3 CD for Computer Analysis Response Team.

#### **PROFESSIONAL PUBLICATIONS**

Woodard, T.A. (2009) Discovering if a HDD has an ATA Password using MHDD – FBI Technical Article. NewsBytes from the Digital Evidence Section (DES) – week ending 8/28/09 (2009)

Woodard, T.A. (2009) Verifying that MHDD Commands do not Write to Data Area of a Drive – FBI Technical Article. NewsBytes from the Digital Evidence Section (DES) – week ending 8/28/09 (2009)

#### **SOFTWARE PROGRAMS WRITTEN/DEVELOPED**

Tom's Time Converter - GUI program to convert human readable date and time to four most common ways date and time is written in data area of CCTV Security DVR's (Hex). 1.0 written in December 2014 (Tested and validated in December 2014)

H264Demuxer - Program written to demux cameras from H264 Elementary Stream (DVR's) (command line tool) (co-authored by FE Emmanuel Velasco). (Beta) January 2015

H264Demuxer\_IVNEI320 - Program written to demux cameras from H264 Elementary Stream (IVNEI320 Model DVR's) (command line tool) (co-authored by FE Emmanuel Velasco). (Beta) February 2015

H264Demuxer\_NETROME - Program written to demux cameras from H264 Elementary Stream (NETROME Model DVR's) (command line tool) (co-authored by FE Emmanuel Velasco). (Beta) March 2015

Manny and Tom's Zigbee Time Converter - GUI program to convert human readable date and time to zigbee epoch date and time is written in seconds, and convert seconds to zigbee epoch time located in data area of CCTV Security DVR's (Hex). (Beta) written in March 2014

H264Demuxer - Program written to demux cameras from H264 Elementary Stream (DVR's) (command line tool) (co-authored by FE Emmanuel Velasco). v1.0 April 2015

#### **COURTROOM TESTIMONY**

State of Illinois v. Manuel Sanchez 09CR-6394 (Testified to Forensic Exam of Child Pornography)

Commonwealth of Virginia v. Jesse Edmond CR14F04012-00 (Testified to reverse engineering and recovery of DVR Video)